

Miniature Reed Relays (3)

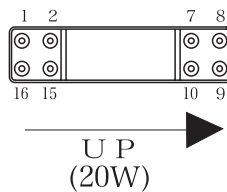
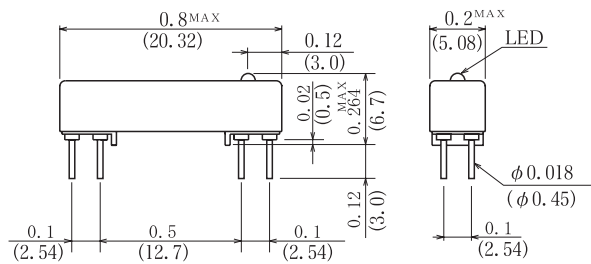


A built-in LED type was added to the 20D, 20W, 20Z and 21D series. Since an LED diode is mounted on the relay, there are even more ways to use relays now that they can be used to shorten troubleshooting time.

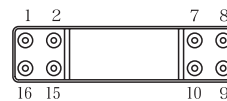
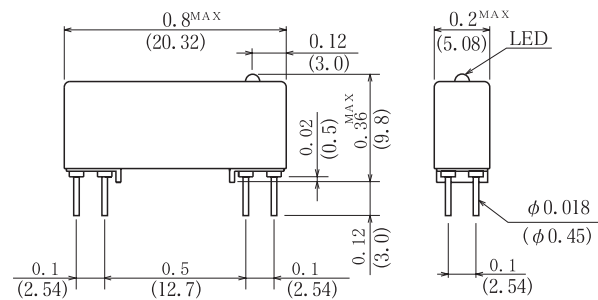
Mechanical Dimensions

All dimensions are measured
in inches (millimeters).

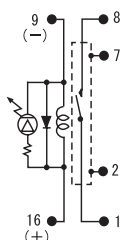
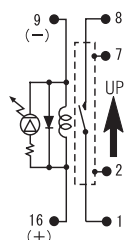
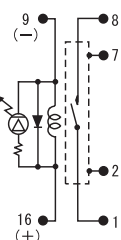
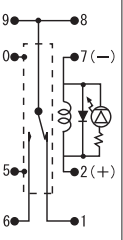
20D-1A□2E1
 20W-1A□2E0
 20Z-1A□2E0
 20D-1C□2E0



21D-1E□2E0





20□, 21D Series			Model Number			Model Number			Model Number			Model Number			
			20D-1A□2E1			20W-1A□2E0			20Z-1A□2E0			20D-1C□2E0			21D-1E□2E0
Parameters		Test Condition		Units		1 Form A		1 Form A		1 Form A		1 Form C		1 Form C	
Coil Specs															
Nominal coil voltage		VDC	5	12	24	5	12	24	5	12	24	5	12	24	
Coil resistance	±10% at20°C	Ω	160	600	1800	70	330	1200	120	600	1800	90	600	1800	
Operating voltage	15°C~35°C	VDC Max	3.6	9.6	19.2	3.6	9.6	19.2	3.6	9.6	19.2	3.6	9.6	19.2	
Operating voltage range	15°C~35°C	VDC	—	—	—	—	—	—	—	—	—	3.6/5.5	9.6/13.2	19.2/26.4	
Release voltage	15°C~35°C	VDC Min	0.7	1.2	2.4	0.7	1.2	2.4	0.7	1.2	2.4	0.7	1.2	2.4	
Contact Ratings															
Switching voltage	Max. DC/Peak AC resistance	Volts	100			500			500			30			
Switching current	Max. DC/Peak AC resistance	Amps	0.5			1.0			0.5			0.2			
Carry current	Max. DC/Peak AC resistance	Amps	1.0			2.0			2.0			0.5			
Contact rating	Max. DC/Peak AC resistance	Watts	10			50			50			3			
Life expectancy	1V. 10mA	×10 ⁶ Cyc	1000			1000			300			50			
Contact resistance	Maximum initial	mΩ	150			100			100			150			
Contact resistance stability	Maximum initial	mΩ	5.0			5.0			5.0			5.0			
Relay Specifications															
Insulation resistance	Between all isolated pins at 100V 20°C 40%RH	Ω	10 ¹¹			10 ¹⁰			10 ¹⁰			10 ¹⁰			
Capacitance		pF-Max													
Across open contacts	Shield guarding		0.2			0.1			0.2			0.7			
Contact to shield	Contacts open, :Make-shield :Break-shield		1.2			2.0			1.2			1.7 3.2			
	shield floating														
Open contact to coil	Shield guarding : Make-Coil :Break-Coil		0.6			0.6			0.6			0.6 1.3			
Dielectric strength	Between contacts	VDC	200			1000			1000			200			
	Contacts to shield		500			1000			1000			500			
Operating time (Including. bounce)	At nominal coil voltage, 100Hz Square wave	msec	0.35			2.5			1.2			1.5			
Release time	Diode suppression	msec	0.25			(No Bounce) 2.5			(No Bounce) 1.2			2.0			
Environmental Ratings		Schematics	Top view 												
Mesurement reference conditons															
Temp. : 15°C~35°C Humidity : 25%~85%RH															
Atmospheric pressure : 860~1060hPa															
Storage temp : -40°C~+80°C															
: -30°C~+80°C (20W, 20Z)															
Operating temp : -20°C~+60°C															
: -10°C~+60°C (20W, 20Z)															
The operating and Release Voltage and the coil resistance are specified at 20°C. These values change approximately 0.4%/°C change in the ambient temperature.															
Vibration : 20Gs to 2000Hz															
Shock : 50Gs															

Notes :

- Values are specified with a resistive load being applied. A contact protective circuit is required for C and L Type loads.
- The values of the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.
- Model 20D-1A□2E1, 20W-1A□2E0 and 20Z-1A□2E0 : Diode is connected to pin 16 (+) and pin 9 (-).
Model 20D-1C□2E0 and 21D-1E□2E0 : Diode is connected to pin 2 (+) and pin 7 (-).
Correct coil polarity must be followed.
- The 20W Series model have Hg wet contacts, are position sensitive, and must be mounted with in 30° of the vertical plan. See the schematic.

ORDERING CODE

2 0 □ - 1 □ □ 2 E □
(1) (2) (3) (4)
2 1 D - 1 E □ 2 E O
(3)

Example 20D-1A12E1 Represents Series 20D with 1Form A, Dry Reed (Rhodium), Coil Voltage 5V, Coaxial Shield with Diode and LED.

- | | |
|-----------------------|---------------------------|
| (1) Reed Switch Type | (3) Coil Voltage |
| D-Dry Reed (Rhodium) | 1-5VDC |
| W-Hg Wet | 2-12VDC |
| Z-Hg Wet All Position | 3-24VDC |
| (2) Contact Form | (4) Insulation Resistance |
| A-Form A | 0-10 ¹⁰ |
| C-Form C | 1-10 ¹¹ |